

Active Recombinant Human IL1B Protein, Pre-aliquoted

Cat. No. IL1B-05H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human IL1B Protein, Ala117 - Ser269, was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Ala117-Ser269
Description	The protein encoded by this gene is a member of the interleukin 1 cytokine family. This cytokine is produced by activated macrophages as a proprotein, which is proteolytically processed to its active form by caspase 1 (CASP1/ICE). This cytokine is an important mediator of the inflammatory response, and is involved in a variety of cellular activities, including cell proliferation, differentiation, and apoptosis. The induction of cyclooxygenase-2 (PTGS2/COX2) by this cytokine in the central nervous system (CNS) is found to contribute to inflammatory pain hypersensitivity. Similarly, IL-1B has been implicated in human osteoarthritis pathogenesis. Patients with severe Coronavirus Disease 2019 (COVID-19) present elevated levels of pro-inflammatory cytokines such as IL-1B in bronchial alveolar lavage fluid samples. The lung damage induced by the Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is to a large extent, a result of the inflammatory response promoted by cytokines such as IL-1B. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2.
Bio-activity	Measured in a cell proliferation assay using D10.G4.1 mouse helper T cells. The

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	ED50 for this effect is <12 pg/mL.
Molecular Mass	Predicted Molecular Mass:17 kDa
N-terminal Sequence Analysis	Ala117 & Pro118
Endotoxin	< 0.10 EU/μg of the protein by the LAL method.
Purity	> 97% by SDS-PAGE under reducing conditions and visualized by silver stain.
Stability	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. • 6 months from date of receipt at room temperature. • 12 months from date of receipt at 2-8 centigrade as supplied. • 1 month at 2-8 centigrade under sterile conditions after reconstitution. • 3 months at -20 to -80 centigrade under sterile conditions after reconstitution.
Reconstitution	For a stock solution, reconstitute at 25 μg/mL in sterile PBS, or simply roll Pre-aliquoted directly into cell culture medium for immediate use.
Shipping	The product is shipped at ambient temperature.

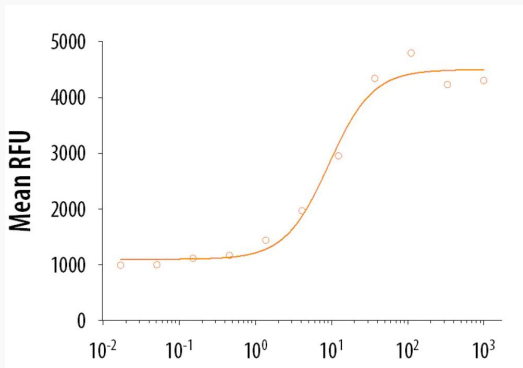
GENE INFORMATION

Gene Name	IL1B interleukin 1 beta [Homo sapiens (human)]
Official Symbol	IL1B
Synonyms	IL1B; interleukin 1 beta; IL-1; IL1F2; IL1beta; IL1-BETA; interleukin-1 beta; IL-1 beta; catabolin; interleukin 1beta; preinterleukin 1 beta; pro-interleukin-1-beta

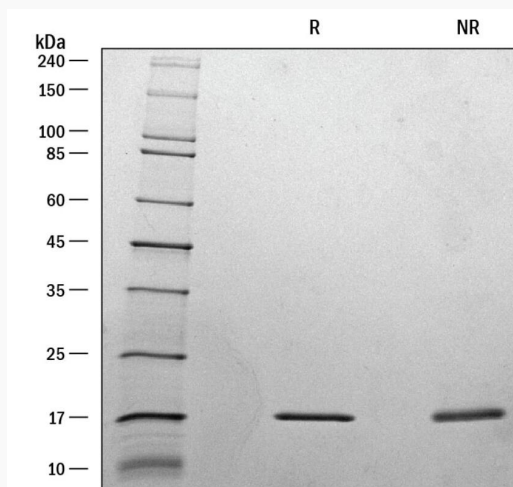
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Gene ID	3553
mRNA Refseq	NM_000576
Protein Refseq	NP_000567
MIM	147720
UniProt ID	P01584
Bio-activity	 Recombinant Human IL-1 beta /IL-1F2 stimulates cell proliferation of the D10.G4.1 mouse helper T cell line. The ED50 for this effect is <12 pg/mL.

SDS-PAGE



1 µg/lane of Recombinant Human IL-1 beta /IL-1F2 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing a single band at 17 kDa.